

ABSTRACT OF THE DISCLOSURE

An anti-microbial and/or anti-fungal synthetic fiber and various products made partially or wholly therefrom. The fiber comprises various thermoplastic polymers and additives in a mono-component form or a bi-component form in either a core-sheath or side-by-side configurations. The anti-microbial synthetic fibers comprise inorganic anti-microbial additives, distributed in certain areas to reduce the amount of the anti-microbial agents being used, and therefore the cost of such fibers. The fibers can incorporate anti-microbial additives so that they are not removed by repeated washing in boiling water and in dry clean cycles and become ineffective and conversely enhance access to the additives by washing or the like. The fibers comprise high tenacity polymers (e.g. PET) in one portion and hydrolysis resistance polymers (e.g. PCT) in another portion with the additives. The fibers can further be blended with non-anti-microbial fibers such as cotton, wool, polyester, acrylic, nylon etc. to provide anti-microbial finished fabrics. In one embodiment, binder fibers are used which are mixed with other fibers.